

FIG.1

$$W_1 = [+1]$$

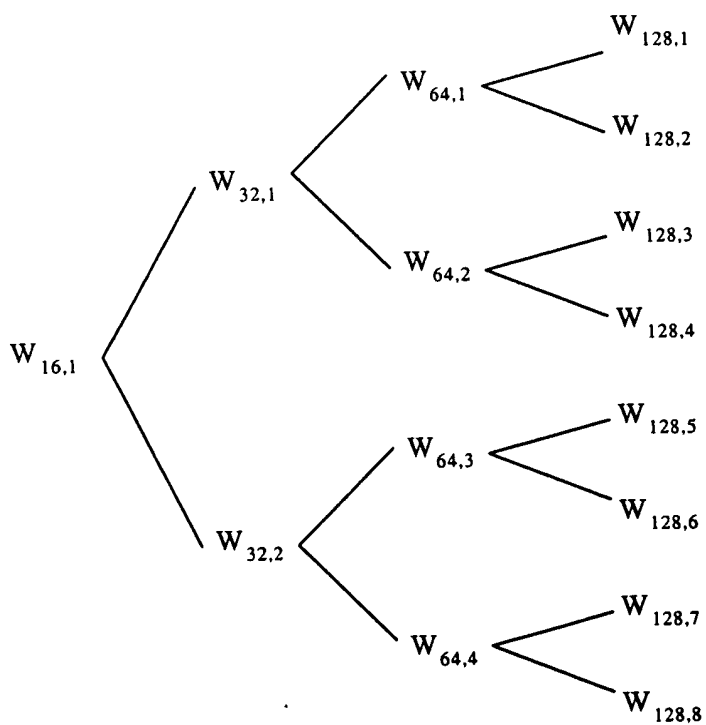
$$W_2 = \begin{bmatrix} +1 & +1 \\ +1 & -1 \end{bmatrix}$$

$$W_{2n} = \begin{bmatrix} W_n & W_n \\ W_n & \overline{W_n} \end{bmatrix}$$

FIG.2

$$W_4 = \begin{bmatrix} +1 & +1 & +1 & +1 \\ +1 & -1 & +1 & -1 \\ +1 & +1 & -1 & -1 \\ +1 & -1 & -1 & +1 \end{bmatrix}$$

FIG 3



$W_{16,1}$

$W_{32,1}$

$W_{64,1}$

$W_{128,1}$

$W_{128,2}$

$W_{64,2}$

$W_{128,3}$

$W_{128,4}$

$W_{32,2}$

$W_{64,3}$

$W_{128,5}$

$W_{128,6}$

$W_{64,4}$

$W_{128,7}$

$W_{128,8}$

$W_{128,9}$

$W_{16,2}$

$W_{128,16}$

$W_{16,3}$

$W_{128,17}$

$W_{128,24}$

$W_{16,16}$

$W_{128,121}$

$W_{128,128}$

FIG 4

